

gtatttcata aaaaagagag gatcgagga ggcgggcaat ctgaactctg glggatggga ctaggggagc agagtcagac cctgaactggc tggggggggg cgtccggagt cagcATGGAA 120
 n e
 AGTCCTGCG GGGTCTGGT ATTCTGCTG CTGGCTGCAG GACTGCCGCT CCAGGCGGCC AHGCGGTICC GTGATGTGCT GGGCCATGAG CAGTATCCGG ATCAGATGAG GAGAGACAC 240
 S L C G U L U F L L L A R A G L P L Q A A K R F A D U L G H E Q Y P D H N A E N H
 CAATTACGTG GTGGCTTC ACATCAAAAT GAATGGGATG AACAGCTGTA TCCAGTGTGG AGGAGGGGAG AGGGCAGATG GAGGACATCC TGGGAGGAG GCCGTGTGCA GGCAGCCCTA 360
 Q L R G W S S D E H E U D E Q L V P U W A R G E G R U K O S W E G G A U Q A A L
 ACCAGTGTAT CACCGGCTT GGTGGGTICC AATATCACCT TCGTAGTGAA CCTGGTGTTC CCCAGATGCC AGAGGGAGA TGCCACGGCC AATATCGTCT ATGAGAGGAA CTGCAGAGT 480
 T S O S P A L U G S H I T F U U H L U F P R C Q K E D A H G H I U V E R H C R S
 GAITGGAGC TGGCTTCTGA CCCATATGTC TACAACTGGA CCACAGGGGC AGACGATGAG GACTGGGAGG ACACACCCAG CCAGAGGCCAG CACCTCAGGT TCCCGAGCG GAGGCCCTTC 600
 D L E L A S O P V U V H H T T G A D D E D U E D H T S Q G Q H L R F P D G K P F
 CCTGGCCCC AGGACGGAA GAATGGGAC TTCTCTACG TCTTCCACAC ACTTGGTCAG TATTTTCAA AGCTGGGTCA GTTTTCAGCA CAGTTTCTA TAACACAGT CACCTGACA 720
 P R P H G R K K U H F U Y U F H T L G Q Y F Q K L G Q C S A R A U S I H T U H L T
 GTTGGCCCTC AGGTCTGGA AGTATGTCT TTTCGAGAC ACGGCCGGGC ATACATTCCC ATCTCCAGG TGAAGACGT GTATGTGATA ACAGATCAGA TCCCTATATT CGTGACCATG 840
 U G P Q U H E U I U F A R H G A Y I P I S K U K D U Y U I T D Q I P I F U T H
 TACAGAGA ATACCGGAA CTCTCTGAT GAACCTTCC TCAGAGACCT CCCCATTTTC TTGATGTCC TCATTCACGA TCCCATGTAT TTCTCAGT ACTCTGCCAT TTCTACAG 960
 Y Q K M D R H S S D E T F L R D L P I F F D U L I H D P S H F L H V S A I S Y K
 TGGACCTTG GGGACACAC TGGCTGTITT GTCTCCACA ATCACACTTT GATCACACG TATGTGTCA ATGGAACCTT CACCTTAC CACACCTGC AACCTGAGT GCGGGACCA 1080
 U H F G D N T G L F U S H N H T L N H T Y U L H G T F H F N L T U Q I A U P G P
 TGCCCTCAG CCACACCTTC GCTTCTTCT TCGACTTCT CTTCGCTGC ATCTTCGCT TCACCCACAT TATCACACC TAGTCCCTCT TTAATGCCIA CTGGCTACAA ATCCATGGAG 1200
 C P S P T P S P S S S T S P S P A S S P S P I L S T P S P S L N P T G Y K S H E
 CTGATGACA TTTCATGAA AACCTGCCGA ATAAACAGAT ATGGTTACTT CAGAGCCACC ATCACCAATG TAGATGGAAT CTTAGAGTC AACATCATCC AGGTAGCAGA TGTCCCATC 1320
 L S D I S N E H C A I H A Y G Y F R A T I T I U D G I L E U N I I Q U A D U P I
 CCCACCTGC AGCTGACCA CTACTGATG GACTTCAITG TGACCTGCAA AGGGGCCCAT CCCACGGAG CCTGTACGAT CATCTCTGAC CCCACCTGCC AGATGCCCA GRACAGGGTG 1440
 P T L Q P D H S L N D F I U T C K G A T P T E A C T I I S D P T C Q I A Q H A U
 TCGAGCCCGG TGGCTGTGGA TGAGCTGTGC CTCTGTCCG TGAGGAGGCT CTTCAATGGG TCCGGCAGT ACCTGTGGA TTTCATCTG GAGAGCGATG CAGCCTTGG CCTCACAC 1560
 C S P U A U D E L C L L S U A R A F H G S G T Y C U H F T L G D D A S L A L T S
 GCGCTGATCT CTATCCCTGG CAGAGACCTA GGCCTCCCTC TGAGAGACGT GAATGGTGTG CTGATCTCCA TTGGCTGCC GGCATGTITT GTACCATGG TTACCATCTT GCTGTACAA 1680
 A L I S I P G K D L G S P L A T U N G U L I S I G C L A N F U T H U T I L L Y K
 AACACACAGA CGTACAGCC AATAGGAAC TGCACCAAGA ACCTGTGTCR GGGCAAGGC CTGAGTGTIT TTCTAGCCA TGCARAAGCC CCGTCTCTCC GAGGAGACCG GAGAGAGGAT 1800
 K H K T Y K P I G H C T R H U U K G K G L S U F L S H A K A P F S A G O R E K D
 CCACTGCTCC AGGACAGCC ATGGATGCTC TAAgtcttca ctctcacttc tgaactggaa cccactcttc tgtgcatgta tgtgagctgt gcagagctac atgaactggta gctgtgttt 1920
 P L L Q D K P W H L
 tctccgatt attgaaat gtatctatg gttaaggag tglgttaot tggcattila gtgaaggat gggaagacag tatttcttcg catctgtatt gtgttilla tctgttaot 2040
 aggtgggga cattgtct gaaggggag gggggagct ctgtaacta aggtctcagg ttaactggga gaggatgcc caggtctctt agatttctac ocaagatgtg cctgaacca 2160
 gtagtctg ccctaaagc catgtctcat caactctat tcaactcatt gaacatacct gagecctga tggactata atgaacca gcttgttga tgggtgtgt gtgtctata 2280
 gatctcatt aaaaagacag tctattaaa aaaaaa 2320

FIGURE 1A

EXON	BAC Start	BAC Stop	cDNA Start	cDNA Stop	Exon Length	
1	83294	83455	1	162	162	poly A signal is position 111614-111619
2	89834	89986	163	314	152	
3	90696	90839	315	458	144	translation start (ATG) is: cDNA: 92 Gene: 83385
4	93419	93594	459	634	176	
5	96509	96665	635	791	157	
6	96983	97300	792	1109	318	
7	103044	103142	1110	1208	99	
8	104413	104515	1209	1311	103	
9	106494	106702	1312	1520	209	
10	110048	110141	1521	1614	94	
11	110592	111633	1615	2656	1042	

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FIGURE 1B

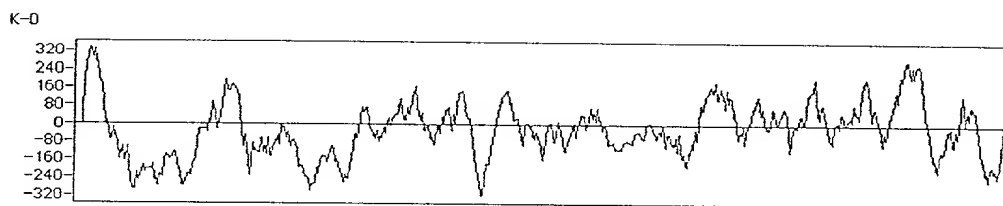


FIGURE 1C

rat	ATGGAAAGTC	TCTGCGGGGT	CCTGGTATTT	CTGCTGCTGG	CTGCAGGACT	GCCGCTCCAG	GCGGCCAAGC	GGTTC	75
mouse	ATGGAAAGTC	TCTGCGGGGT	CCTGGGATTT	CTGCTGCTGG	CTGCAGGACT	GCCTCTCCAG	GCTGCCAAGC	GATTT	75
human	ATGGAATGTC	TCTACTATTT	CCTGGGATTT	CTGCTCCTGG	CTGCAAGATT	GCCACTTGAT	GCCGCCAAAC	GATTT	75
rat	CGTGATGTGC	TGGGCCATGA	GCAGTATCCG	GATCACATGA	GGGAGAACAA	CCAATTACGT	GGCTGGTCTT	CAGAT	150
mouse	CGTGATGTGC	TGGGCCATGA	ACAGTATCCC	GATCACATGA	GAGAGCACAA	CCAATTACGT	GGCTGGTCTT	CGGAT	150
human	CATGATGTGC	TGGGCAATGA	AAGACCTTCT	GCTTACATGA	GGGAGCACAA	TCAATTAAAT	GGCTGGTCTT	CTGAT	150
rat	GAAAATGAAT	GGGATGAACA	GCTGTATCCA	GTGTGGAGGA	GGGGAGAGGG	CAGATGGAAG	GACTCCTGGG	AAGGA	225
mouse	GAAAATGAAT	GGGATGAACA	CCTGTATCCA	GTGTGGAGGA	GGGGAGACGG	CAGGTGGAAG	GACTCCTGGG	AAGGA	225
human	GAAAATGACT	GGAATGAAAA	ACTCTACCCA	GTGTGGAAGC	GGGGAGACAT	GAGGTGGAAG	AACCTCTGGA	AGGGA	225
rat	GGCCGTGTGC	AGGCAGCCCT	AACCAGTGAT	TCACCGGCCT	TGGTGGGTTC	CAATATCACC	TTCGTAGTGA	ACCTG	300
mouse	GGCCGTGTGC	AGGCAGTCCT	GACCAGTGAC	TCACCGGCTC	TGGTGGGTTC	CAATATCACT	TTTGTGGTGA	ACCTG	300
human	GGCCGTGTGC	AGGCGGTCTC	GACCAGTGAC	TCACCGGCC	TCGTGGGCTC	AAATATAACA	TTTGCCTGTA	ACCTG	300
rat	GTGTTCCCCA	GATGCCAGAA	GGAAGATGCC	AACGGCAATA	TCGTCTATGA	GAGGAACTGC	AGAAGTGATT	TGGAG	375
mouse	GTGTTCCCCA	GATGCCAGAA	GGAAGATGCT	AATGGCAATA	TCGTCTATGA	GAAGAACTGC	AGGAATGATT	TGGGA	375
human	ATATTCCTTA	GATGCCAAAA	GGAAGATGCC	AATGGCAACA	TAGTCTATGA	GAAGAACTGC	AGAAATGAGG	CTGGT	375
rat	CTGGCTTCTG	ACCCGTATGT	CTACAACCTGG	ACCACAGGGG	CAGACGATGA	GGAAGTGGAA	GACAACACCA	GCCAA	450
mouse	CTGACATCTG	ACCTGCATGT	CTACAACCTGG	ACTGCAGGGG	CAGATGATGG	TGACTGGGAA	GATGGCACCA	GCCGA	450
human	TTATCTGCTG	ATCCATATGT	TTACAACCTGG	ACAGCATGGT	CAGAGGACAG	TGACGGGGAA	AATGGCACCG	GCCAA	450
rat	GGCCAGCACC	TCAGGTTCCC	CGACGGGAAG	CCCTTCCCTC	GCCCCACGG	ACGGAAGAAA	TGGAACCTTCG	TCTAC	525
mouse	AGCCAGCATC	TCAGGTTCCC	GGACAGGAGG	CCCTTCCCTC	GCCCCATGG	ATGGAAGAAA	TGGAGCTTTG	TCTAC	525
human	AGCCATCATA	ACGTCTTCCC	TGATGGGAAA	CCTTTTCTCT	ACCACCCCGG	ATGGAGAAGA	TGGAATTTCA	TCTAC	525
rat	GTCTTCCACA	CACCTTGGTCA	GTATTTTCAA	AAGCTGGGTC	AGTGTTCAGC	ACGAGTTTCT	ATAAACACAG	TCAAC	600
mouse	GTCTTCCACA	CACCTTGGCCA	GTATTTTCAA	AAACTGGGTC	GGTGTTCAGC	ACGGGTTTCT	ATAAACACAG	TCAAC	600
human	GTCTTCCACA	CACCTTGGTCA	GTATTTCCAG	AAATTGGGAC	GATGTTCAGT	GAGAGTTTCT	GTGAACACAG	CCAAT	600
rat	TTGACAGTTG	GCCCTCAGGT	CATGGAAGTG	ATTGTCTTTC	GAAGACACGG	CCGGGCATAC	ATTCCCATCT	CCAAA	675
mouse	TTGACAGCTG	GCCCTCAGGT	CATGGAAGTG	ACTGTCTTTC	GAAGATACGG	CCGGGCATAC	ATTCCCATCT	CGAAG	675
human	GTGACACTTG	GGCCTCAACT	CATGGAAGTG	ACTGTCTACA	GAAGACATGG	ACGGGCATAT	GTTCCCATCG	CACAA	675
rat	GTGAAAGACG	TGTATGTGAT	AACAGATCAG	ATCCCTATAT	TCGTGACCAT	GTACCAGAAG	AATGACCGGA	ACTCG	750
mouse	GTGAAAGATG	TGTATGTGAT	AACAGATCAG	ATCCCTGTAT	TCGTGACCAT	GTCCCAGAAG	AATGACAGGA	ACTTG	750
human	GTGAAAGATG	TGTACGTGGT	AACAGATCAG	ATTCTCTGTG	TTGTGACTAT	GTTCCAGAAG	AACGATCGAA	ATTCA	750
rat	TCTGATGAAA	CCTTCCTCAG	AGACCTCCCC	ATTTTCTTCG	ATGTCCTCAT	TCACGATCCC	AGTCATTTC	TCAAC	825
mouse	TCTGATGAGA	TCTTCCTCAG	AGACCTCCCC	ATCGTCTTCG	ATGTCCTCAT	TCATGATCCC	AGCCACTTCC	TCAAC	825
human	TCCGACGAAA	CCTTCCTCAA	AGATCTCCCC	ATTATGTTTG	ATGTCCTGAT	TCATGATCCT	AGCCACTTCC	TCAAT	825
rat	TACTCTGCCA	TTTCCTACAA	GTGGAACTTT	GGGGACAACA	CTGGCCTGTT	TGTCTCCAAC	AATCACA	ACTT	900
mouse	GACTCTGCCA	TTTCCTACAA	GTGGAACTTT	GGGGACAACA	CTGGCCTGTT	TGTCTCCAAC	AATCACA	ACTT	900
human	TATTCTACCA	TTAACTACAA	GTGGAGCTTC	GGGGATAATA	CTGGCCTGTT	TGTTTCCACC	AATCATACTG	TGAAT	900
rat	CACACGTATG	TGCTCAATGG	AACCTTCAAC	TTAAACCTCA	CCGTGCAAAC	TGCAGTGCCG	GG-----	-ACCA	966
mouse	CACACTTATG	TGCTCAATGG	AACCTTCAAC	CTTAACCTCA	CCGTGCAAAC	TGCAGTGCCC	GG-----	-GCCA	966
human	CACACGTATG	TGCTCAATGG	AACCTTCAGC	CTTAACCTCA	CTGTGAAAGC	TGCAGCACCA	GGACCTTGTC	CGCCA	975
rat	-TGCC-CC-T	CACCCACACC	TTGCGCTTCT	TCTTCGACTT	CTCCTTC---	---GCCTGCA	TCTTCGCTT	CA---	1029
mouse	-TGCC-C--T	--CCC--CC	TTGCGCTTCG	ACTCCGCTT	CACCTTCAAC	TCCGCGCTTA	CCTTCGCTT	CACCT	1032
human	CCGCCACCAC	CACCCAGACC	TTC-----	-----	-----AA-	-----A	-----	-ACC-	1004
rat	---CCCACAT	TATCAACACC	TAGTCCCTCT	TTAATGCCTA	CTGGCTACAA	ATCCATGGAG	CTGAGTGACA	TTTCC	1101
mouse	TTGCCACAT	TATCAACACC	TAGCCCTCT	TTAATGCCTA	CTGGTTACAA	ATCCATGGAG	CTGAGTGACA	TTTCC	1107
human	-----	-----CACC	-----CCTTCT	TTAGGACCTG	CTGGTGACAA	CCCCCTGGAG	CTGAGTAGGA	TTCTT	1059
rat	AATGAAAAC	GCCGAATAAA	CAGATATGGT	TACTTCAGAG	CCACCATCAC	AATTGTAGAT	GGAATCCTAG	AAGTC	1176
mouse	AATGAAAAC	GCCGAATAAA	CAGATATGGC	TACTTCAGAG	CCACCATCAC	AATTGTAGAG	GGATCCTGG	AAGTC	1182
human	GATGAAAAC	GCCAGATTAA	CAGATATGSC	CACCTTCAAG	CCACCATCAC	AATTGTAGAG	GGAATCTTAG	AGGTT	1134

FIGURE 2A

rat	AACATCATCC	AGGTAGCAGA	TGTCCCAATC	CCCACACTGC	AGCCTGACAA	CTCACTGATG	GACTTCATTG	TGACC	1251
mouse	AGCATCATGC	AGATAGCAGA	TGTCCCCATG	CCCACACCGC	AGCCTGCCAA	CTCCCTGATG	GACTTCACTG	TGACC	1257
human	AACATCATCC	AGATGACAGA	CGTCCTGATG	CCGGTGCCAT	GGCCTGAAAG	CTCCCTAATA	GACTTTGTCTG	TGACC	1209
rat	TGCAAAGGGG	CCACTCCCAC	GGAAGCCTGT	ACGATCATCT	CTGACCCAC	CTGCCAGATC	GCCCAGAACA	GGGTG	1326
mouse	TGCAAAGGGG	CCACCCCAT	GGAAGCCTGT	ACGATCATCT	CCGACCCAC	CTGCCAGATC	GCCCAGAACC	GGGTC	1332
human	TGCCAAGGGA	GCATTCCCAC	GGAGGTCTGT	ACCATCATTT	CTGACCCAC	CTGCGAGATC	ACCCAGAACA	CAGTC	1284
rat	TGCAGCCCGG	TGGCTGTGGA	TGAGCTGTGC	CTCCTGTCCG	TGAGGAGAGC	CTTCAATGGG	TCCGGCACGT	ACTGT	1401
mouse	TGCAGCCCTG	TGGCTGTGGA	TGGGCTGTGC	CTGCTGTCTG	TGAGAAGAGC	CTTCAATGGG	TCTGGCACCT	ACTGT	1407
human	TGCAGCCCTG	TGGATGTGGA	TGAGATGTGT	CTGCTGACTG	TGAGACGAAC	CTTCAATGGG	TCTGGGACGT	ACTGT	1359
rat	GTGAATTTCA	CTCTGGGAGA	CGATGCAAGC	CTGGCCCTCA	CCAGCGCCCT	GATCTCTATC	CCTGGCAAAG	ACCTA	1476
mouse	GTGAATTTCA	CTCTGGGAGA	TGATGCAAGC	CTGGCCCTCA	CCAGCACCCCT	GATCTCTATC	CCTGGCAAAG	ACCCA	1482
human	GTGAACCTCA	CCCTGGGGGA	TGACACAAGC	CTGGCTCTCA	CGAGCACCCCT	GATTTCTGTT	CCTGACAGAG	ACCCA	1434
rat	GGCTCCCCTC	TGAGAACAGT	GAATGGTGTC	CTGATCTCCA	TTGGCTGCCT	GGCCATGTTT	GTCACCATGG	TTACC	1551
mouse	GACTCCCCTC	TGAGAGCAGT	GAATGGTGTC	CTGATCTCCA	TCGGCTGCCT	GGCTGTGCTT	GTCACCATGG	TTACC	1557
human	GCCTCGCCTT	TAAGGATGGC	AAACAGTGCC	CTGATCTCCG	TTGGCTGCTT	GGCCATATTT	GTCACTGTGA	TCTCC	1509
rat	ATCTTGCTGT	ACAAAAAACA	CAAGACGTAC	AAGCCAATAG	GAAACTGCAC	CAGGAACGTG	GTCAAGGGCA	AAGGC	1626
mouse	ATCTTGCTGT	ACAAAAAACA	CAAGGCGTAC	AAGCCAATAG	GAAACTGCCC	CAGGAACACG	GTCAAGGGCA	AGGGC	1632
human	CTCTTGGTGT	ACAAAAAACA	CAAGGAATAC	AACCCAATAG	AAAATAGTCC	TGGGAATGTG	GTCAGAAGCA	AAGGC	1584
rat	CTGAGTGTTC	TTCTCAGCCA	TGCAAAAGCC	CCGTCTCTCC	GAGGAGACCG	GGAGAAGGAT	CCACTGCTCC	AGGAC	1701
mouse	CTGAGTGTTC	TCCTCAGTCA	CGCGAAAGCC	CCGTCTCTCC	GAGGAGACCA	GGAGAAGGAT	CCATTGCTCC	AGGAC	1707
human	CTGAGTGTCT	TTCTCAACCG	TGCAAAAGCC	GTGTCTCTCC	CGGGAAACCA	GGAAAAGGAT	CCGCTACTC-	---AA	1655
rat	AAGCCATGGA	TGCTCTAA--	-----	-					1719
mouse	AAGCCAAGGA	CACTCTAA--	-----	-					1725
human	AAACCAAGAA	---TTTAAAG	GAGTTTCTTA	A					1683

FIGURE 2A, cont'd.

rat	MESLCGVLVF	LLLAAGLPLQ	AAKRFRDVLG	HEQYPDHMR	NNQLRGWSSD	50
mouse	MESLCGVLGF	LLLAAGLPLQ	AAKRFRDVLG	HEQYPDHMR	HNQLRGWSSD	50
human	MECLYYFLGF	LLLAARLPLD	AAKRFRDVLG	NERPSAYMR	HNQLNGWSSD	50
rat	ENEWDEQLYP	VWRRGEGRWK	DSWEGGRVQA	ALTSDSPALV	GSNITFVVNL	100
mouse	ENEWDEHLYP	VWRRGDGRWK	DSWEGGRVQA	VLTSDSPALV	GSNITFVVNL	100
human	ENDWNEKLYP	VWKRGDMRWK	NSWKGGRVQA	VLTSDSPALV	GSNITFAVNL	100
rat	VFPRCQKEDA	NGNIVYERN	RSDLELASDP	YVYNWTTGAD	DEDWEDNTSQ	150
mouse	VFPRCQKEDA	NGNIVYEKNC	RNDLGLTSDL	HVYNWTTAGAD	DGDWEDGTSR	150
human	IFPRCQKEDA	NGNIVYEKNC	RNEAGLSADP	YVYNWTAWSE	DSDGENGTGQ	150
rat	GQHLRFDPDGK	PFPRPHGRKK	WNFVYVFHTL	GQYFQKLQGC	SARVSINTVN	200
mouse	SQHLRFDPDRR	PFPRPHGWKK	WSFVYVFHTL	GQYFQKLGR	SARVSINTVN	200
human	SHHNVFDPDGK	PFPHHPGWRR	WNFIYVFHTL	GQYFQKLGR	SVRVSVNTAN	200
rat	LTVGPQVMEV	IVFRRHGRAY	IPISKVKDVY	VITDQIPIFV	TMYQKNDRNS	250
mouse	LTAGPQVMEV	TVFRRYGRAY	IPISKVKDVY	VITDQIPVFV	TMSQKNDRNL	250
human	VTLGPQLMEV	TVYRRHGRAY	VPIAQVKDVY	VVTDQIPVFV	TMFQKNDRNS	250
rat	SDETFLRDLP	IFFDVLIHDP	SHFLNYSAIS	YKWNFGDNTG	LFVSNHHTLN	300
mouse	SDEIFLRDLP	IVFDVLIHDP	SHFLNDSAIS	YKWNFGDNTG	LFVSNHHTLN	300
human	SDETFLKDL	IMFDVLIHDP	SHFLNYSTIN	YKWSFGDNTG	LFVSTNHHTVN	300
rat	HTYVLNGTFN	FNLTVQTAVP	GPCSPSTPS-	-PSSSTSPSP	ASSPSTPLST	348
mouse	HTYVLNGTFN	LNLTVQTAVP	GPCPPSPST	PPSPSTPPLP	SPSPSTPLST	350
human	HTYVLNGTFS	LNLTVKAAAP	GPCPPPPPP--	-----PPRP	-----SK	334
rat	PSPSLMPTGY	KSMELSDISN	ENCRINRYGY	FRATITIVDG	ILEVNIQVA	398
mouse	PSPSLMPTGY	KSMELSDISN	ENCRINRYGY	FRATITIVEG	ILEVSIMQIA	400
human	PTPSLGAPGD	NPLELSRIPD	ENCQINRYGH	FQATITIVEG	ILEVNIQMT	384
rat	DVPIPTLQPD	NSLMDFIVTC	KGATPTEACT	IISDPTCQIA	QNRVCSPVAV	448
mouse	DVPMPTPQPA	NSLMDFIVTC	KGATPMEACT	IISDPTCQIA	QNRVCSPVAV	450
human	DVLMPVPWPE	SSLIDFVVT	QGSIPTEVCT	IISDPTCEIT	QNTVCSPVDV	434
rat	DELCLLSVRR	AFNGSGTYCV	NFTLGDDASL	ALTSALISIP	GKDLGSPLRT	498
mouse	DGLCLLSVRR	AFNGSGTYCV	NFTLGDDASL	ALTSTLISIP	GKDPDSPLRA	500
human	DEMCLLTVRR	TFNGSGTYCV	NLTGDDTSL	ALTSTLISVP	DRDPASPLRM	484
rat	VNGVLISIGC	LAMFVTMVTI	LLYKKHKTYK	PIGNCTRNVV	KGKGLSVFLS	548
mouse	VNGVLISIGC	LAVLVTMVTI	LLYKKHKAYK	PIGNCPRNTV	KGKGLSVLLS	550
human	ANSALISVGC	LAIFVTVISL	LVYKKHKKEYN	PIENSPGNVV	RSKGLSVFLN	534
rat	HAKAPFSRGD	REKDPLLQDK	PW--ML			572
mouse	HAKAPFFRGD	QEKDPLLQDK	PR--TL			574
human	RAKAVFFPGN	QEKDPLIKNQ	EFGVS			560

FIGURE 2B

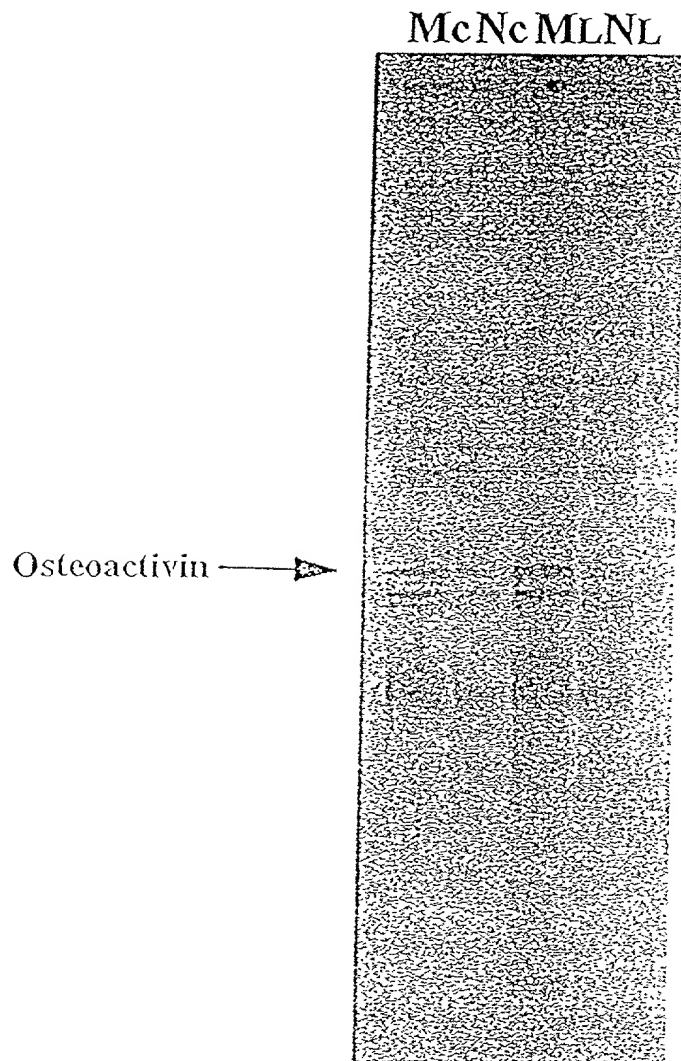


FIGURE 3

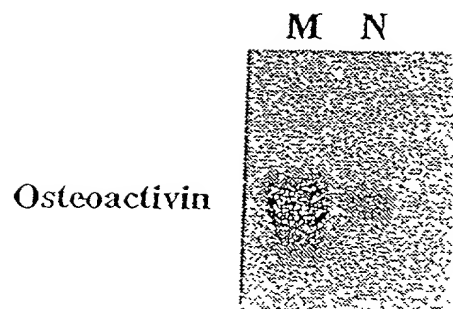


FIGURE 4A

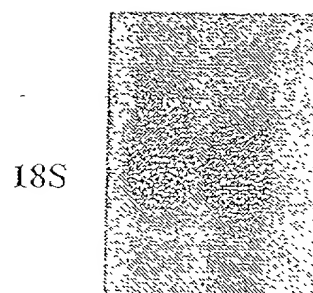


FIGURE 4B



FIGURE 5

100E30" 5/20E4060



Figure 5A

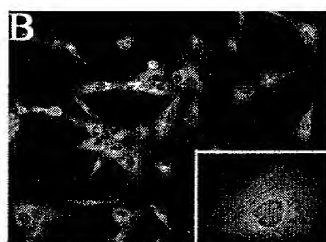


Figure 5B

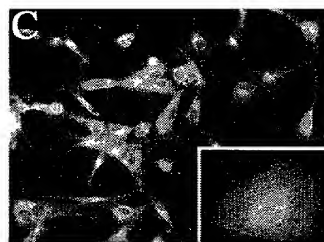


Figure 5C

Osteoactivin

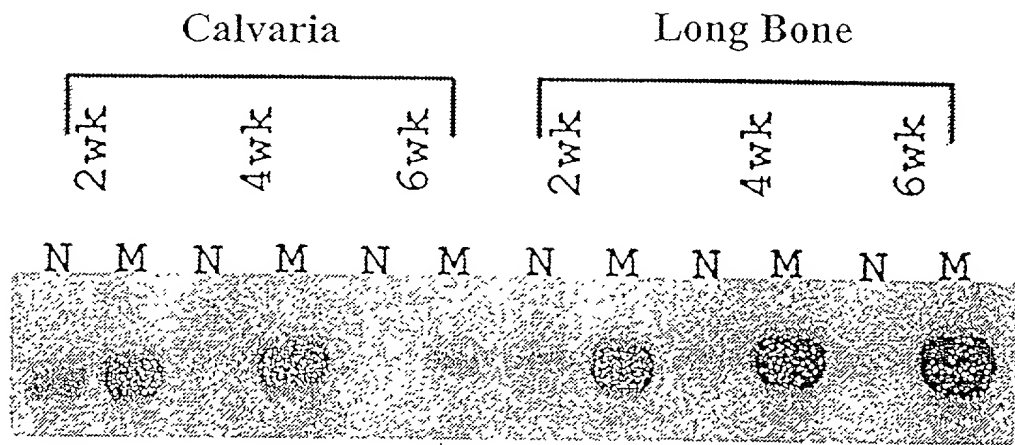


FIGURE 6

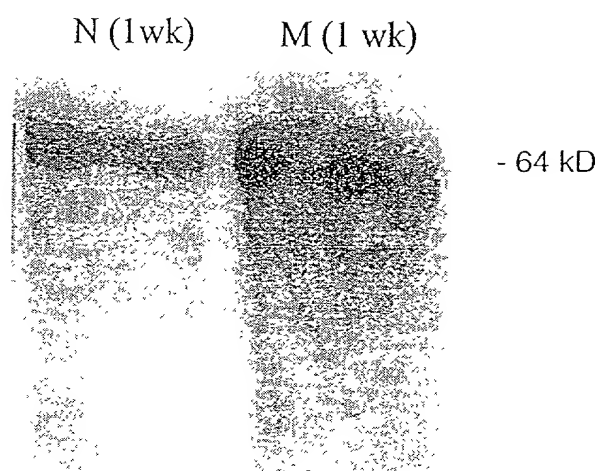
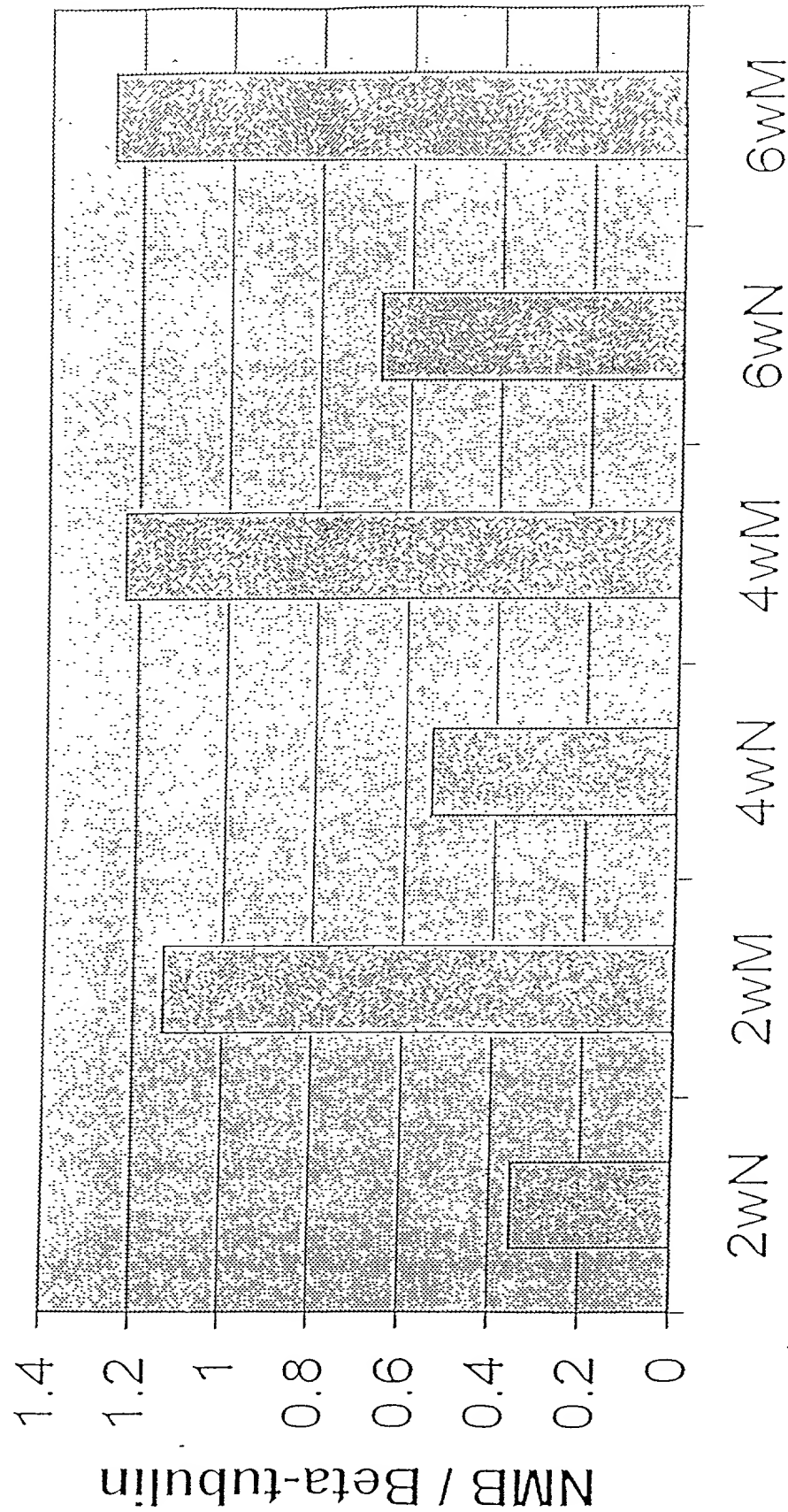


FIGURE 8

Osteoactivin expression



Long Bone

FIGURE 9

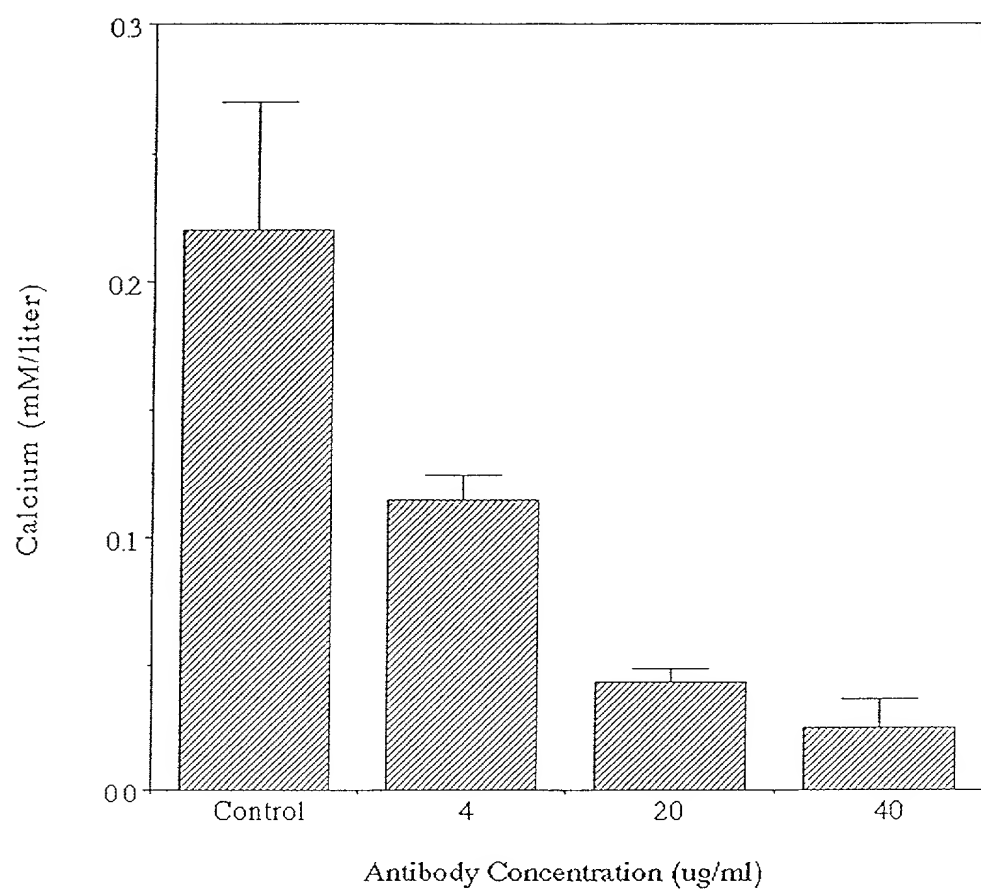


FIGURE 10